English in the urban environment: resources for 21st century readers

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Where teachers of English as a foreign language (EFL) once observed a paucity of authentic language input, public displays of written English are now proliferating. Ideas for capitalising on this abundance can be drawn from two strands of pedagogic thought: a psycholinguistic approach to conventional literacy long established in foreign, second and first language education (e.g., Teng, 2009), and a more recent and critical approach informed by diverse theoretical understandings of the 'linguistic landscape' (e.g., Rowland, 2013). In this paper I draw from these two approaches to suggest ways of helping EFL learners use environmental print to develop knowledge and skills required of English readers in the twenty-first century: (1) fluency in breaking the codes of English and other languages of publicly displayed text; (2) facility with making meaning as the English of these texts becomes ever more diverse in cultural, historical and contextual implication; (3) use of environmental English in contexts that range from the local to the transnational; and (4) critique of the presence of English and attendant worldviews in the urban environment (Chern & Dooley, forthcoming). The psychological concept of motivation and the complementary sociological concept of investment are at the heart of my deliberations here: realisation of the pedagogic potential of environmental print to develop literate resources requires consideration of sources of motivation in the classroom learning situation (Dörnyei & Ushioda, 2011), as well as learner investment in literate practices in English (Norton, 2010).

INTRODUCTION

In these times of globalisation and internationalisation, public displays of written English offer abundant possibilities for teaching and learning English as a foreign language (EFL). It is not surprising then that attention has been drawn to the pedagogic potential of the English print appearing in internationalised campus environments, for example, as language input in an elementary school in Taipei (Teng, 2009). This strand of pedagogic thinking taps into more than forty years of psycholinguistic work on conventional literacy (CL) in first (Lee, 1989), second (Hudelson, 1984) and foreign (Tasker, 1995; Schwarzer, 2001) languages. Attention has been drawn also to the pedagogic potential of the 'linguistic landscape' (LL) of places beyond the urban campus where English appears alongside other languages and print is often integrated with visual language (Cenoz & Gorter, 2008; Shohamy & Waksman, 2009; Sayer, 2010). Although it has some psycholinguistic roots, this second approach is theoretically diverse, drawing on theory from urban sociology, literacy studies, linguistic anthropology, urban sociolinguistics and sociocultural studies (Dagenais, Moore, Sabatier, Lamarre & Armand, 2008). It is concerned not only with language input, but also with pragmatic and critical reading skills and sophisticated code-breaking and meaning-making with multilingual, multimodal texts. Like the CL approach to environmental print, then, the LL approach offers possibilities for pursuing literacy outcomes crucial for twenty first century readers of English. Indeed, in the EFL field it has already been translated into practice in project-based learning for adult students in Japan (Rowland, 2013). In general terms, my aim here is to explore some of the potential of both the CL and LL approaches for developing EFL students' literacy resources in these times of internationalisation and globalisation. In doing so, I pay particular attention to learner motivation and investment as keys to realisation of that potential.

Specifically, I am interested in the pedagogic potential of environmental print that is 'authentic' rather than 'pedagogic' in purpose. This includes English print found beyond the campus in multilingual, multimodal texts on signage, clothes, objects, vehicles, buildings, banners, posters and so forth. In Taiwan, this type of English print has proliferated. Amongst other things, this reflects both the governmental push for an 'English-friendly living environment' in times of internationalisation and globalisation (Teng, 2009), and commercial interest in capitalising on the status of global English and such connotations of that language as cosmopolitanism and coolness (Curtin, 2009). Some similar forces are at work in the linguistic landscapes of other Asian cities, for instance, Bangkok (Huebner, 2006) and Tokyo (Backhaus, 2006). In addition to the environmental print of the linguistic landscape beyond the campus, I attend here also to functional English print found on campuses, for example, bilingual signs posted in classrooms, amenities and facilities in response to the English-friendly policy. Non-context-related print, such as posters of useful sentences/expressions from the textbook put up to create an English learning environment on campus (Teng, 2009), is beyond my purview.

In short, I am concerned here with the pedagogic potential of environmental English print that is 'authentic' rather than 'pedagogic'. I look at what has been described as "pedagogically motivated" interaction (Rowland, 2013, p. 3) with and around that print – in other words, pedagogic uses of texts that are not pedagogic in purpose.

Part of the potential of authentic environmental texts relates to possibilities for developing a range of knowledge and skills required of readers in the twenty-first century (e.g., Cenoz & Gorter, 2008; Sayer, 2010; Rowland, 2013). In the terms of the four resources model (Freebody & Luke, 1990; Luke & Freebody, 1997) long used in first and second language English education in Australia, and applied also in the EFL field in Taiwan (Huang, 2011a,b), these are resources for code-breaking (e.g., alphabetic resources), meaning-making or text participation (semantic resources), text use (pragmatic resources), and text analysis (critical resources). The underlying assumption of this model is that reading is a social practice by which meaning is constructed and reconstructed through text; it is practice 'done' differently in myriad public and private spaces; it is practice implicated in the politics and relations of power of literate cultures (Luke & Freebody, 1997). For EFL educators, the politics of the global status of English, and of the worldviews produced through that language in different types of text (e.g., language textbooks, teen magazines), are particularly salient (Huang, 2011a,b).

The social practice perspective prompts normative questions about literacy: What kinds of readers does/should EFL education produce? How should we shape English literacies, and the development of persons literate in English, in these times of globalisation and internationalisation? One Taiwanese response to these questions suggests that EFL readers require skills in all four families of literate practice: "a well-rounded reader or a wholesome reading practice necessarily comprises of not only coding, semantic, and pragmatic competence, but also critical competence" (Huang, 2011a, p. 156). The aim is to equip EFL learners with critical as well as conventional reading skills because writers of English "with their own purposes and worldviews… manipulate…. users' understanding of their place in the world" (Huang, 2011a, p. 146). Accordingly, I suggest that literate resources for each of the four families of practice might be developed through environmental print pedagogies in EFL education (Chern & Dooley, forthcoming):

- fluency in cracking one of the more opaque of alphabetic codes, both in isolation and in integration with visual codes (e.g., graphics) and with the written codes of other languages (e.g., bilingual wordplay) *(code-breaking resources)*;

- facility with making meaning in English as internationalisation and globalisation render the language ever more diverse in cultural, historical and contextual implication *(text participation resources)*;
- use of that English for a diversity of purposes in contexts from the local to the transnational *(text use resources)*; and
- socio-political critique of the very presence of English in urban places, and of attendant representations of the world in those environments *(text analytic resources)*.

Another part of the potential of environmental print lies in motivation; indeed, motivation is at the heart of the rationale for environmental print pedagogies. Advocates point to possibilities for using environmental print to tap or spark motivation to participate in literacy instruction activities in the school or university (e.g., Huddelson, 1984; Orellana & Hernández, 1999; Reutzel, Fawson, Young, Morrison & Wilcox, 2003; Cotton, 2012). This perspective recognises environmental print as "a tremendous stimulus to the young child to learn to read", invoking "natural curiosity" by way of explanation (Cotton, 2011, p. 73). The assumption seems to be that motivation arises when the boundary between functional everyday literacies and schooled literacies is weakened in order to leverage school outcomes from that curiosity. But 'motivation' is not defined directly.

Nonetheless, there are some common understandings of motivation in the environmental print literature and these are broadly consistent with a prominent perspective on second/foreign language learning motivation. Consider the following excerpt taken from a book providing ideas for translating research on environmental print into classroom instructional practice:

> In these studies, interactions with a capable adult giving active assistance to children playing with literacy props increased *print motivation*, print awareness, and ability to read environmental print significantly… Children who are aware of print and can read environmental print *see themselves as readers* and writers and are more *proactive in seeking out print*… Children who *believe in their own success as readers* and writers *begin formal reading instruction more eagerly*, with a deeper *sense of competence*, and with greater *self esteem* (Prior & Gerard, 2004, p. 13, emphases added).

While Prior and Gerard are discussing pedagogy for young learners of English as a first or second language in an English-dominant society, their understanding of motivation is common in pedagogic thinking around environmental print, including EFL applications (Teng, 2009). From this perspective, environmental print is valued for its capacity to generate 'print motivation': a sense of self as a literate person, feelings of success and competence, self-esteem, and displays of eager behaviour in the classroom. This understanding of motivation is broadly consistent with the theories that represented the 'educational shift' in the second/foreign language motivation field during the 1990s (Dörnyei & Ushioda, 2011). In these theories the immediate learning situation is viewed as a source of learner motivation. 'Fun' is another component of situational motivation raised in the EFL literature on pedagogies of environmental print (Sayer, 2010).

Classroom-based motivation has become particularly salient in EFL education as English competence has shifted from being an elite pursuit, often of older learners, to a basic educational outcome demanded of all across their educational and working careers. Sources of motivation in the learning situation are especially important when learners have little motivation to use English outside the classroom, yet need to maintain commitment to learning English from early childhood to university (Chern, 2002; Liaw, 2009; Chou, 2012). Indeed, this is one of the challenges we are addressing at this conference: we know from our work in English teaching and learning contexts that societal demand for a language does not

necessarily translate easily into individual motivation. In my own Australian university setting, I am not the first Faculty member to observe that motivation is one of the most common of the dissertation topics of interest to EFL teachers seeking doctoral qualifications. As with games, songs and chants, picture books, drama, readers' theatre and other 'motivating' activities (Chien, 2012; Chou, 2012), environmental print activities would seem to hold out some promise for contemporary EFL classrooms.

My focus so far has been on the potential of environmental print pedagogies to motivate participation in classroom instruction. As argued above, this is an increasingly important motivational dynamic in EFL education. But there is another: some exponents of environmental print highlight the potential to motivate students to transfer literate knowledge and skills acquired through formal classroom instruction into informal, self-directed reading activities in the everyday world (Reutzel et al., 2003). Their focus is not on how environmental print pedagogy motivates formal literacy instruction, but on how formal literacy instruction motivates environmental print reading. In a world where English is a language of wider communication, this has become a crucial dynamic: motivation to merely 'pass the test' cannot sustain the lifelong learning now required of EFL learners (Chern, 2002; Chou, 2012). Therefore, environmental print pedagogies that motivate learners to engage pedagogically with the English that they would otherwise walk past in public places are of some interest (Chern & Dooley, forthcoming).

In the words of the title of this conference, then, my argument in this first section of my paper here has been that environmental print pedagogies seem to promise 'solutions' to some 'problems' of 'motivation' that matter at present for EFL teachers and students. However, potential is one thing; realisation is another. Accordingly, in the next section I briefly review research which has looked at the efficacy of environmental print pedagogies in practice for both motivating students and developing literate resources. In doing so, I highlight the perspective which frames the suggestions I make in the third section of the paper for capitalising on environmental print for EFL learning in globalised and internationalised urban spaces.

THE EFFICACY OF ENVIRONMENTAL PRINT PEDAGOGIES

The rationale for environmental print pedagogies turns on the potential for fostering motivation and building literate resources. But research raises questions about the realisation of this potential in practice. I begin my review of that research in this section by looking at what is known about environmental print and learner motivation.

Environmental print and motivation

As already noted, advocates of environmental print pedagogies seek not only to tap or spark motivation for engagement in school literacy activities (e.g., Huddelson, 1984; Orellana & Hernández, 1999; Reutzel et al., 2003; Cotton, 2010), but also to motivate learners to transfer the literate capabilities they acquire at school to textual environments beyond campus (Reutzel et al., 2003). It is cause for consideration, then, that research has found that learners do not necessarily even notice foreign/second language print in the environment (Dagenais et al., 2008; Rowland, 2013). Moreover, when asked to attend to environmental print, they may not be motivated to read any and all texts or even those which their peers read. Rather, they tend to read environmental print willingly only when it is meaningful to them. Meaningfulness itself tends to vary with the age, gender, ethnicity, social class, and individual life experiences of the learner (Orellana & Hernández, 1999). In short, environmental print might be motivating, but it would seem that the source of the motivation is in the social provenance of the print rather than the mere fact of its location in the environment. This finding warrants further discussion.

To elaborate, in the course of a literacy walk around an off-campus U.S. urban environment, some first grade learners of English as a second language (Orellana & Hernández, 1999) would read only some of the print they encountered. The children enthusiastically read and talked about video shop posters for the films of popular peer culture they loved; the graffiti on their local streets; and the signs for the streets, shops, churches, markets and other places of their personal and family lives. But their attention to signs and banners with which they had no such connection was perfunctory at best. The notion of 'investment' (Norton, 2010) is useful for understanding this motivational phenomenon.

In general terms, 'investment' is a concept, drawn from the sociology of Pierre Bourdieu, which has been developed to complement the psychological concept of second/foreign language learning motivation (Norton, 2010). The concept is used to denote learner commitment to language and literacy practices which are expected to yield some profit that matters to them given their social identities and their actual or imagined communities: the cultural capital of language competence, for example, or the symbolic capital of reputation as a competent language user. Social investments are complexly linked to psychological motivation. Second/foreign language learning motivation may dry up, for instance, if the learner is alienated by racist, sexist, elitist or homophobic practices of a given classroom that render investment in the literacies of that community of learning impossible. As a corollary, learners who are highly motivated, but unable to invest in the literate practices of the classroom learning community may be judged 'unmotivated' by teacher or peers – in many cases, something of a self-fulfilling prophecy (Norton, 2010).

With environmental print pedagogies, the situation is particularly complex. Investment may turn on the appeal of the literate practices of not only the classroom learning community, but also the real world community from which the English inscribed on the environment emanates. It cannot be assumed that any one piece of print in the local environment is a community artefact for the learners. It is only such when it originates from a group – real or imagined – to which the learner belongs. To return to the U.S. first graders (Orellana & Hernández, 1999), it would seem that these learners were invested variously in the literate practices of their real neighbourhood and family communities and of the popular culture communities of their imagination. And with these differential investments came differential motivation to read the environmental print generated by the literate practices of those communities. For teachers, then, the implication is that "we need to understand what is important in our students' lives before making judgments about their motivation to read or their capacity to do so" on the basis of their response to environmental print activities devised for pedagogic purposes (Orellana & Hernández, 1999, p. 616). In short, we need to consider print motivation in conjunction with investment in the authentic and pedagogic literate practices in which the print is embedded.

Motivation is at the heart also of the case for the 'language detectives' projects of the LL approach to environmental print for EFL learners (Sayer, 2010; Rowland, 2013). In these projects students venture beyond the campus with digital cameras to capture images that they then take back to the classroom for interpretation and critical analysis. It is claimed that the projects will be "*fun* and motivating" because they require students to "engage with authentic language as *they go out in their communities*… and then combine *their technological savvy*… with *their critical thinking skills*" (Sayer, 2010, p. 153; emphases added). Sources of motivation in the immediate learning situation are invoked: there is *fun* to be had; *savvy* and *skills* are to be given reign. It is assumed also that LL projects weaken the boundaries between school and everyday literacies by engaging students with print from *their communities.* However, the concept of investment suggests that the community status of any one piece of print for any one learner would need to be established empirically in a given print environment.

The concept of investment has been brought to bear on LL projects (Norton, 2010). In Canada, Dagenais et al. (2008) worked with elementary school children to document the linguistic landscape of their neighbourhoods in Vancouver, British Columbia and Montreal, Quebec. 60 per cent of the Vancouver students, all of whom were undertaking French Immersion schooling, spoke English at home and some of the remaining students had home languages other than English or French. In the francophone school in Montreal, 8 per cent of the students spoke languages other than French or English at home (Dagenais, et al., 2008). This LL project was informed by psycholinguistic research which showed that the presence of languages in the linguistic environment is a factor in language maintenance and shift (Landry & Bourhis, 1997). During the project, the children took digital photographs of their city and exchanged multimodal materials, including videos, photographs, letters and posters with their peers in the other city. As noted by Norton (2010), these pedagogic activities brought the children's identities and imagined linguistic landscapes to the fore, thereby highlighting investments in language learning in officially French-English bilingual, but sociologically multilingual, Canada.

A similar project was conducted with 6th graders in Cardiff, Wales (Cotton, 2011). Although in an English-speaking area, the city of Cardiff is rich in Welsh signage. The project required the students to take a walk around the city, making notes about the languages on display and their responses to these. The children were prompted to notice the choice of language on unilingual and bilingual signs, the purposes for which Welsh and English were used in environmental print, and their own feelings and views on the use of the two languages. All the children were English-speaking, although many spoke Welsh as a second language, and all had studied Welsh formally at school since 3rd grade. Post-walk classroom discussions focused on language preferences and cultural identity, leading the children to conclude that where English enabled wider communication, Welsh enabled entry into a cultural identity that was 'theirs'. In this way, the children – and their teacher – explored the investment of class members in bilingualism.

To sum, the research literature suggests that (1) the motivating effects of environmental print pedagogies depend on the meaningfulness of the print for students; (2) meaningfulness varies with social difference and personal experience; (3) the concept of investment is useful for understanding students' motivation to read the print of the urban environment; and (4) LL projects provide opportunities for exploring those investments. I turn now to research on the realisation of the potential of environmental print pedagogies for developing literate resources. Much of this research is concerned with CL pedagogies. The focus is on the linguistic mode only, as distinct from the visual-verbal integration of multimodal texts, and on code-breaking, meaning-making and text use resources. There is, however, some investigation of the potential of LL projects which focus more strongly on pragmatic and critical resources, along with sophisticated multimodal and multilingual code-breaking and meaning-making resources.

Environmental print and literacy resources

In the field of early literacy education in English-dominant western societies, discoveries about children's facility with environmental print prior to formal literacy instruction were translated into play-based classroom activities from the 1980s onwards (e.g., Strickland, Morrow, McGee & Jones, 1990; Soderman, Gregory, McCarty, 2005). Since we try to recreate in classrooms "the purpose and affordances of print in a real context" it was reasoned, it "makes sense to return our children's thinking to the authentic… situations they encounter outside the classroom" (Cotton, 2011, p. 75). This logic was taken up by teachers of English as a second language who made use of walking field trips around the school, play in classroom learning centres (e.g., 'the grocery store') and other activities involving products and product labels. The aim was to capitalise on second language learners' knowledge and

interest while building their sense of themselves as English readers and their English vocabulary (e.g., Huddelson, 1999; Orellana & Hernández, 1999). This CL tradition has influenced EFL practice (Teng, 2009), too.

Research findings about the efficacy of CL pedagogy for developing literate resources are complex. It was found that the approach enhanced environmental print reading, although there were contradictory results about the necessity for adult involvement in children's play with environmental print texts (Neuman & Roskos, 1993; Vukelich, 1994; Kuby, Goodstadt-Killoran, Aldridge & Kirkland, 1999). Further, questions were raised about the demotivating effects of "contrived" talk about environmental print during a literacy walk. Commenting on the literacy walk with the U.S. first graders, the researcher observed: "no matter how natural we tried to make our questions, we came across as adults quizzing children" (Orellana & Hernández, 1999, p. 615). In other words, environmental print pedagogy may weaken the boundary between everyday and school literacy in terms of content, but interaction around the texts remains 'pedagogic'; it is not simply 'authentic'. This can impact student interest in environmental print activities.

The questioning of environmental print pedagogies continued during the 1990s as doubts about the very value of environmental print reading were raised. At this time it was asked whether it was the *print* that children were reading or the *graphic and extra-textual environment* of the print. As a corollary, it was asked also whether environmental print reading generated transferable print knowledge and skills (Prior & Gerard, 2004). These questions reflect the priorities of the CL approach to environmental print. They arose because there had been an assumption that linguistic code-breaking skills were developed during environmental print reading and would transfer to other reading contexts. Subsequent research, some with second language learners, suggested that readers of environmental print do rely heavily on the visual semiotic mode of graphics and on the extra-textual environment of the print. Further, it found that transferable print outcomes tend to be attained only when adults assist students to focus on the formal features of print: immersion in contexts rich in environmental print seems to be inadequate for development of print awareness, knowledge and skills (McGee, 1986; Prior & Gerard, 2004).

Other researchers have looked at transferability from the opposite angle, studying the transfer of literacy knowledge and skills from school reading activities to authentic reading of environmental print. They have found that phonemic and graphophonic knowledge and word identification strategies taught at school do not necessarily transfer to the reading of environmental print (Reutzel et al., 2003). It seems that the 'routine' developed for making meaning by processing the visual semiotic mode of graphics, and extra-textual information, persists even when young children have learned print knowledge and skills. Importantly for my purposes here, these routines are not limited to English-speaking children: for example, Lee (1989) found that young Taiwanese children relied heavily on extra-textual clues to process environmental Mandarin print. To the extent that these environmental print processing routines transfer across languages, there would seem to be a challenge for EFL educators enacting pedagogies of environmental print.

As noted above, there is little research on the realisation of the potential of LL projects to develop EFL students' literate resources. This is probably an artefact of the newness of the LL field. Several position statements have sketched possibilities. LL projects, it is suggested, potentially develop a host of capabilities: linguistic competence, pragmatic competence, multicompetence for handling multiple languages, multimodal reading, and understanding of the affective and connotational dimensions of language (Cenoz & Gorter 2008; Shohamy & Waksman 2009; Sayer 2010; Rowland, 2013). In other words, there would seem to be potential for building resources to underpin each family of literate practice required by the multilingual, multimodal texts that saturate the environment of twenty-first

century urban areas: code-breaking, meaning-making, text use and text analysis (Chern & Dooley, forthcoming).

Where the motivational claims of LL pedagogy have yet to be investigated, the claims about the potential for developing literate resources have been tested, to some extent, in a study conducted with adult EFL learners in Japan (Rowland, 2013). This study set out to examine whether practice supported the claims made in the literature (Cenoz & Gorter, 2008; Dagenais et al., 2009; Sayer, 2010). To this end, the students were sent out into the linguistic landscape as language detectives to photograph all the English signage they could find. After a week, they worked in groups to categorise and interpret the photographs and to develop a report on their findings. Analysis of the student reports indicated that the students (1) made initial steps towards critique of the absence of languages other than Japanese and English in the linguistic environment; (2) explored informational, regulatory and persuasive functions of environmental English print; (3) consolidated their existing linguistic competence; (4) acquired multimodal text processing skills; (5) developed their multicompetence; and (5) were sensitised to the connotative meanings of language. The conclusion was that "[o]verall, the … claims summarised from the literature were corroborated to different degrees" (Rowland, 2013, p. 10). In short, the study found that the language detectives project went some way to developing all the resources promised in the LL literature.

The research reviewed above suggests that effective pedagogic use of environmental print to build literate resources requires teachers to: (1) draw learners' attention to the formal features of the print; and (2) enable learners to integrate print into their processing routines for the texts. Virtually all of this research is drawn from the CL tradition; it is only a few years since some of the earliest proponents of LL pedagogy were able to say that "the relationship between the linguistic landscape and second language acquisition… has hardly been explored" (Cenoz & Gorter, 2008, p. 272). Similarly, others were able to comment that the lack of educational interest in the LL "in the field of education" was "somewhat paradoxical" given psycholinguistic roots of LL studies in research on adolescents' responses to signs and of readers' interactions with multilingual environmental print (Dagenais et al., 2008,p. 253). However, research on the language detectives project with adult EFL learners in Japan (Rowland, 2013) offers cautious support for claims about the potential to build EFL students' multilingual and multimodal pragmatic and critical resources, along with code-breaking and meaning-making resources for the environmental print of contemporary urban spaces.

I have looked here at research which has investigated claims about the motivational dynamics of environmental print pedagogies and the literate resources on offer to students through those pedagogies. With respect to motivation, the conclusion can be drawn that teachers need to account for learner investment in literate practice involving environmental print, as well as motivation in the immediate classroom learning situation. As for literate resources, explicit teaching may be required if that potential is to be realised. With these principles in mind, I turn now to some suggestions for utilising environmental print in EFL contexts.

CAPITALISING ON THE PEDAGOGIC POTENTIAL OF ENVIRONMENTAL PRINT

This section is organised around the two approaches described in the environmental print literature: the CL and LL approaches. There is some overlap between the two, especially in terms of the emphasis on the pragmatics of functional texts. But the configurations of literate practices pursued by each are relatively distinct. To elaborate, the CL approach has been focused on knowledge and skills for breaking the alphabetic code of English in the course of making meaning from functional texts (e.g., Prior & Gerard, 2004; Vukelich,

Christie & Enz, 2012; Soderman, Gregory & McCarthy, 2005). It offers a wealth of ideas for teaching traditional print knowledge and skills, although there has been some recent attention to multimodality and more sophisticated sociocultual treatment of textual purpose (e.g., Cotton, 2011). In contrast, multimodality and multilinguality have always been to the fore in the LL approach, as has critical competence (e.g., Dagenais et al., 2008; Cotton, 2011; Rowland, 2013). Accordingly, the approach offers an array of promising ideas for complementing the CL approach.

CL pedagogies for codebreaking, meaning-making and text use resources

From the CL research reviewed earlier, it is apparent that environmental print pedagogies enable students to not only use print functionally in everyday situations (*text user*), but also to study the print in order to learn transferable knowledge and skills (*codebreaker*, *meaning-maker*). If they are to be effective, these two possibilities need to be taken up strategically. To this end, I look at each in turn, considering motivational factors. I begin with text use.

My experience as a learner of Chinese as a foreign language suggests to me that the text use option is fraught with de-motivating contrivance. In my everyday Australian life there is rarely any authentic need to use the Chinese rather than the English on the signs at the bank, the bus stop or the Automatic Teller Machine or to order from the Chinese on menus. Indeed, the choice of Chinese can complicate everyday literate practices by slowing them down or perplexing others; it generally turns a functional encounter into a pedagogic one – something that is not necessarily appreciated by others in the interaction. The contrast between this and my experience of functional interactions in Chinese language societies is stark. Yet, even in those societies, there are situations, in airports for example, where my learner Chinese is clearly the option less preferred by busy service personnel fluent in global English. Generally, to choose one's weakest language is to render an interaction 'inauthentic' by violating the norms of text use. Of course, there are exceptions. For instance, when the Australian service provider's English does not stretch to the full functionality of the interaction, then a word of Chinese or a finger pointed at a Chinese word can be facilitative. Similarly, even bumbling Chinese can enhance interactions with service providers with whom I have built up friendly relationships (e.g., dumpling sellers near campus). My point here is that simply using the foreign language in a functional transaction may well render the encounter 'pedagogic' rather than 'authentic'. The attendant social awkwardness can be de-motivating: I am disinclined, at the least, to repeat some attempts to use Chinese in Australia.

The preceding arguments notwithstanding, there may well be reasons for EFL students to make functional use of environmental English in their home societies, for example, when the environmental print is useful for textbook-related tasks such as describing the environment in English (Teng, 2009) or in the context of an exchange program with an international sister school or university (Chern & Dooley, forthcoming). With some teacher creativity and imagination, motivating ways of using environmental English print might be developed for these cases. Opportunities to use environmental English for descriptive purposes could be built into excursions to tourist attractions where bilingual signage is in place, for example, in the restrooms, cloakrooms, cafés and shops of parks, museums, zoos and so forth. Students might be encouraged to predict the signage they will see, look at the signage in the course of the excursion, and to incorporate images of it into post-excursion writing assignments. Alternatively, they could use the signage by way of 'field research' to help them prepare an 'English living guide' to the city for visiting students from their sister school (Chern & Dooley, forthcoming). As long as the norms of authentic interaction are not violated – or a friendly service provider, perhaps one who has been tipped off in advance, is willing to countenance some pedagogic purpose in the transactions – then motivational

effects might be expected if the activity deepens the fun, relevance and mastery that are sources of motivation in the immediate learning situation.

Other text use activities are possible. In some settings, it might be appropriate to set up environmental print play centres in classrooms where more proficient English users can interact with students (Huddelson, 1984; McGee, 1986; Strickland et al., 1990; Neumann & Roskos, 1993; Vukelich, 1994; Prior & Gerard, 2004). Furthermore, language awareness activities can be conducted with environmental print, highlighting the functional use of the print. For example, students might bring product labels into class for discussion about the English language information on the label and the purposes it serves (e.g., Huddelson, 1984; McGee, 1986). These activities could be linked to relevant textbook chapters or units. Similarly, students can be asked to think about the choice of information conveyed by a public text for a given purpose and audience, and the choices of font, colour, size, letter case and even materials such as cheap or high quality paper made to this end (Cotton, 2011). In short, students can be led to not only use environmental print functionally, but also to develop awareness of the functionality of the print.

I turn now from functional resources to the learning of transferable code-breaking and meaning-making knowledge and skills. This is an outcome particularly well-served by the CL literature. For more than forty years much of the impulse for CL approaches to environmental print in English-dominant societies has come from teachers' search for effective, motivating, classroom-developed approaches to basic skills instruction. There are major political-economic struggles over student, teacher and commercial control and interest at play in this movement, but these are not my focus here. Rather, it is the wealth of ideas for teaching and learning basic skills to which I am drawing attention. These are ideas for:

- creating classroom and campus environments rich in meaningful and functional English print (McGee, 1986; Schwarzer, 2001; Soderman et al., 2005; Vukelich et al., 2012);
- involving EFL learners in the creation of that print, for example, signs indicating the floors of the school buildings, labels on cleaning equipment, and signs on gym and playground equipment (Teng, 2009);
- displaying meaningful and readable English print from beyond the campus on boards and in books (McGee, 1986; Strickland et al., 1990; Schwarzer, 2001; Prior & Gerard, 2004; Soderman et al., 2005; Vukelich et al., 2012);
- leading children on English literacy walks on and beyond campus and developing activities for follow-up in the classroom (Huddelson, 1984; Strickland et al., 1990; Orellana & Hernández, 1999; Prior & Gerard, 2004; Vukelich et al., 2012);
- setting homework assignments requiring students to record the English print they see in the course of everyday activities such as going to school, going shopping and so forth (Orellana & Hernández, 1999);
- explicitly drawing students' attention to the formal features of print through
    - alphabet charts using brand names that are prominent in the local print environment (González-Bueno, 2003; Vukelich et al., 2012);
    - an alphabetised book of class members' names (Prior & Gerard, 2004);
    - collages and word walls (Prior & Gerard, 2004);
    - sorting and matching games (McGee, 1986; Prior & Gerard, 2004);
    - word study and decoding lessons attending to letter formation, letter names, sound-symbol relationships and spelling patterns (Strickland et al., 1990; Reutzel et al., 2003; Prior & Gerard, 2004; Teng, 2009; Vukelich et al., 2012);
- using bingo, concentration, fish, cloze, board games, puzzles and other games to practise environmental print reading (Prior & Gerard, 2004); and
- assessing student learning from environmental print (Prior & Gerard, 2004).

The literature listed above is a treasure trove of resources to help teachers enact environmental print pedagogies. In addition to descriptions of pedagogic activities, there are lists of functions and print for different play/real life settings (e.g., Vukelich, 1994; Cotton, 2011); lesson plans, photocopiable templates for classroom activities and games, and guidelines for assessment (Prior & Gerard, 2004); and 'scripts' for talk designed to develop students' awareness of environmental print (González-Bueno, 2003). Many of these ideas and resources would once have been of little interest to EFL teachers. Indeed, as an EFL teacher in China in the early 1990s, I opted for more traditional pedagogic approaches despite my strong background in the CL tradition. But two decades on the situation seems to have changed significantly, in some contexts at least.

As EFL students are required to learn English earlier and to a higher standard of proficiency, classroom sources of motivation have become especially salient (Chern, 2002; Liaw, 2009; Chou, 2012). In response, EFL teachers are creatively and imaginatively infusing their classrooms with games, songs and chants, picture books, drama, readers' theatre and other activities which are fun and relevant and allow students to feel a sense of mastery (Chien, 2012; Chou, 2012). The CL tradition is rich with potential in this regard. In presenting suggestions here I have included many options for teacher intervention. While there is debate in first and second language contexts about the necessity for teacher intervention in environmental print pedagogies (Kuby et al, 1999), research in Taiwan has suggested that teachers need to take an active role in teaching EFL students how to read particular items of environmental print and how to learn from it (Teng, 2009). This has informed my thinking here.

LL pedagogies for multilingual, multimodal resources

The LL approach to environmental print offers suggestions for developing code, semantic, pragmatic and critical competence with multilingual, multimodal text. Further, it creates awareness of students' investment in learning particular languages. I look now at each of these possibilities in turn.

Where the CL tradition has long been focused on developing literate resources for reading print on unilingual signs, the more recent LL approach is attuned to the multilingual, multimodal textual environments of globalised and internationalised environments. LL pedagogic visions (Cenoz & Gorter, 2008; Sayer, 2010) and classroom applications (Dagenais et al., 2008; Cotton, 2011; Rowland, 2013) typically take students into those environments to capture images or write fieldnotes for later analysis and reflection in the classroom. Group work and project work feature in the pedagogy. Teacher questioning can be used to prompt substantive learning discussions (Chern & Dooley, forthcoming) about:

- the selection and integration of verbal and visual languages (*code-breaking*)
    - e.g., Which languages does this text use? Which visual elements? How are the verbal and visual languages integrated?
- the meanings carried by those codes (*meaning-making*)
    - e.g., Which meanings do the verbal and visual elements create? Do these meanings reinforce, complement or contradict each other?
- the functions of multilingual, multimodal messages (*text use*)
    - e.g., What does this text make us think and feel? Does it urge us to do anything?
- the interests served by the texts (*text analysis*)
    - e.g., Why is this language used for this purpose in our environment? Whose view of the world does this choice of language privilege? How is the world represented through that language? Whose interest does it serve? Given these understandings, what linguistic, cultural or political responses do we wish to make to these texts?

Finally, LL activities have been used to bring students' investments in language and language learning to the fore in both bilingual societies (Dagenais et al., 2008; Cotton, 2011) and EFL contexts (Rowland, 2013). This pedagogic purpose is easily built into the activities described above. Teacher questioning can hone in on students' investments in real and imagined communities. The following suggestions for questions are drawn from discussions of LL projects that have been conducted in Canada, Wales and Japan:

- How does the use of [name of language] in our print environment make you feel? Would you prefer the sign to have been in another language? Why? Why not? (Cotton, 2011)
- Are you surprised by how ubiquitous English is in our print environment? Why or why not? Are you surprised by any of the languages we found in our print environment? Why or why not? Do you think any languages are missing from our print environment? Why or why not? (Rowland, 2013)
- How would you describe our linguistic landscape to someone in another city? Why would you describe it this way? Do you have a favourite place in our linguistic landscape? Why this place and not another? Does print in languages other than [name of language] interest you? Why or why not? Which languages are most important in the LL of our city? Which are less important? Why is this so? (Dagenais et al., 2008)

In short, the Ll approach suggests practical ideas for building students' code, semantic, pragmatic and critical competence in multilingual, multimodal print environments. These ideas may be of interest in EFL settings where conventional and critical literacies are valued (e.g., Huang, 2011a, b) and student investment in English learning is of interest to learners and their teachers.

CONCLUDING REMARKS

For teachers of EFL, the English of globalised and internationalised urban places around the world now offers increasingly abundant opportunities for developing literate resources for a balanced repertoire of reading capabilities: code-breaking, meaning-making, text use and text analytic practices. I have shown here that the CL and LL approaches suggest different outcomes from environmental print pedagogies and different ways of pursuing these outcomes. Neither approach is intrinsically better; there is no one correct method for making pedagogic use of authentic environmental English. Given the motivational premise – and indeed, promise – of environmental print pedagogies, effective approaches are those which work with the English learning motivation and investments of particular EFL students and produce outcomes valued in a particular EFL context. I conclude by returning to the normative questions prompted by understandings of literacy as social practice (Freebody & Luke, 1990; Luke & Freebody, 1997): What kinds of readers does/should EFL education produce through appropriation of environmental English print? How should we shape English literacies for public places inscribed with English in the course of globalisation and internationalisation? These are questions to bring to our work as teachers, researchers, policy makers, textbook writers and teacher educators in the EFL field. Ours are not the only voices in normative discussions about English literacies, and are rarely the powerful voices, but we might seize upon the moments and spaces in our own contexts where we can contribute in this regard – and not only in relation to environmental print.

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